

# Together With



WINTER 2008

A PUBLICATION OF THE TENNESSEE DEPARTMENT OF LABOR &amp; WORKFORCE DEVELOPMENT

## Preventing Skin Problems from Working with Portland Cement

Portland cement is a generic term used to describe a variety of building materials valued for their strong adhesive properties when mixed with water. Employees who work with portland cement are at risk of developing skin problems, ranging from mild and brief to severe and chronic. Wet portland cement can damage the skin because it is caustic, abrasive, and absorbs moisture. Portland cement also contains trace amounts of hexavalent chromium, a toxin harmful to the skin. Dry Portland cement is less hazardous to the skin because it is not as caustic as the wet material.

Wet portland cement can cause caustic burns, sometimes referred to as cement burns. Cement burns may result in blisters, dead or hardened skin, or black or green skin. In severe cases, these burns may extend to the bone and cause disfiguring scars or disability. Employees cannot rely on pain or discomfort to alert them to cement burns, because cement burns may not cause immediate pain or discomfort. By the time an employee becomes aware of a cement burn, much damage has already been done. Cement burns can get worse even after skin contact with cement has ended. Skin contact with wet portland cement can also cause inflammation of the skin, referred to as dermatitis. Signs and symptoms of dermatitis can include itching, redness, swelling, blisters, scaling, and other changes in the normal condition of the skin. Any employee experiencing a cement burn is advised to see a health care professional immediately.

The best way to prevent cement-related skin problems is to minimize skin contact with wet portland cement. Compliance with TOSHA's requirements for provision of personal protective equipment (PPE), washing facilities, hazard communication and safety training, along with good skin hygiene and work practices, will protect against hazardous contact with wet portland cement. For more information and help visit [www.osha.gov](http://www.osha.gov) and click on Portland Cement in the alphabetic index.

- Wash areas of the skin that come into contact with wet cement in clean, cool water and use a pH-neutral or slightly acidic soap.
- Consider using a mildly acidic solution such as diluted vinegar to neutralize caustic residues of cement on the skin.
- Do not wash with abrasives or waterless hand cleaners, such as alcohol-based gels or citrus cleaners.
- Avoid wearing watches and rings at work since wet cement can collect under such items.
- Do not use lanolin, petroleum jelly, or other skin softening products as they can seal cement residue to the skin.

## Hearing Conservation, Part 4

If employees are in a hearing conservation program, the following audiometric test records must be maintained for each employee in the program:

- A. The name and job title of the employee
- B. The date of the audiogram
- C. The name of the audiometric test examiner
- D. The date of the last calibration of the audiometer
- E. The most recent noise exposure assessment for the employee
- F. The employer must maintain accurate records of the measurements of the background noise levels in the audiometric test rooms. If the audiometric tests are conducted in a mobile test van, the background noise levels in the test booth should be taken at the site where hearing tests are taken. This is to ensure that there is not too much outside noise for an accurate audiometric test.

Note: Often employers have one noise monitoring result for several employees in the same work area who are exposed essentially to the same noise levels. That monitoring result then represents each of these employees' noise exposure.

## TOSHA | TIPS

Together with TOSHA is the newsletter of the Division of Occupational Safety and Health.

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James G. Neeley  
Commissioner

John Winkler  
TOSHA Administrator

220 French Landing Drive  
Nashville, TN 37243-1002

(615)741-2793  
FAX (615)741-3325

Accident Reporting  
1-800-249-8510  
TDD 1-800-475-1351

[www.tn.gov/labor-wfd](http://www.tn.gov/labor-wfd)

Editor Sandra Bennett  
Layout & Design  
Jeff Hentschel

Comments and suggestions are welcome.

Inquiries regarding Together With TOSHA should be directed to the TOSHA Division Training Section:  
(615)741-5726



Together with TOSHA is a quarterly publication of the Tennessee Department of Labor and Workforce Development, Authorization No. 337352; 19,300 copies; December 2007; \$0.14 per copy. The Tennessee Department of Labor and Workforce Development is committed to principles of equal opportunity, equal access, and affirmative action. Auxiliary aids and services are available upon request to individuals with disabilities.

**Condition:** Sufficient access and working space was not provided and/or maintained around electric equipment operating at 600 volts nominal, or less, to permit ready and safe operation and maintenance.

**Potential Effects:** Electric shock, burns, and electrocution from contact with live parts; head and other injuries, from contact with equipment, furniture or structural material, during reflex reaction to contact with live part.

**Standard:** 29 CFR 1910.303(g)(1)

**Recommended Action:** Provide and maintain sufficient access and working space around all electric equipment operating at 600 volts nominal or less. Table S-1 defines the working clearances that shall be provided and maintained around all electric equipment to permit ready and safe operation and maintenance of such equipment. In addition to the dimensions shown in Table S-1, work space may not be less than 30 inches wide in front of the covered electric equipment.

**Table S-1. -- Minimum Depth of Clear Working Space at Electric Equipment, 600 V or Less**

| Nominal voltage to ground | Minimum clear distance for condition <sup>2,3</sup> |      |             |      |             |     |
|---------------------------|---|------|-------------|------|-------------|-----|
|                           | Condition A   |      | Condition B |      | Condition C |     |
|                           | m   | ft   | m           | ft   | m           | ft  |
| <b>0-150</b>              | 10.9  | 13.0 | 10.9        | 13.0 | 0.9         | 3.0 |
| <b>151-600</b>            | 10.9  | 13.0 | 1.0         | 3.5  | 1.2         | 4.0 |

**Notes to Table S-1:**

1. Minimum clear distances may be 0.7 m (2.5 ft) for installations built before April 16, 1981.
2. Conditions A, B, and C are as follows:
 

Condition A -- Exposed live parts on one side and no live or grounded parts on the other side of the working space, or exposed live parts on both sides effectively guarded by suitable wood or other insulating material. Insulated wire or insulated busbars operating at not over 300 volts are not considered live parts.

Condition B -- Exposed live parts on one side and grounded parts on the other side.

Condition C -- Exposed live parts on both sides of the work space (not guarded as provided in Condition A) with the operator between.
3. Working space is not required in back of assemblies such as dead-front switchboards or motor control centers where there are no renewable or adjustable parts (such as fuses or switches) on the back and where all connections are accessible from locations other than the back. Where rear access is required to work on deenergized parts on the back of enclosed equipment, a minimum working space of 762 mm (30 in.) horizontally shall be provided.

# 32nd Annual Tennessee Safety and Health Congress

## "Promoting Safety & Health for Tennessee Workers"

**July 26-29, 2009**

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Look for the 2009 Information and Registration Brochure being mailed in March.  
Exhibitor contracts available in January.

For more information contact (615) 741-7143 or visit [www.tnsafetycongress.org](http://www.tnsafetycongress.org)

# LEARN & LIVE

*From the Public Sector Files*

A 33-year-old temporary employee died when he fell from the platform of an aerial lift. The victim was assigned to assist an electrician in replacing burned out bulbs in the ceiling of a covered basketball court. The victim and the electrician used the aerial lift to ascend approximately 30 feet to check the first light that was out. They discovered that they did not have the correct type of bulb with them. The victim tightened the bulb that was not working and it came on. The electrician then lowered the lift and, once on the ground, went to get the correct bulbs from another building, telling the victim to wait with the lift. When the electrician returned about 20 minutes later, he found the victim lying on the ground in a puddle of blood. He was transported to a local hospital, but later died from his injuries.

## To Prevent Such Incidents from Happening

1. Ensure that only trained persons are allowed to operate an aerial lift.
2. Ensure that a body belt is worn with a lanyard attached to the boom or basket when working from an aerial lift.
3. Assess the workplace to determine if hazards are present, or likely to be present, which necessitate the use of personal protective equipment before work is done.
4. Employ safety-related work practices to prevent electrical shock or other injuries resulting from either direct or indirect electrical contacts, when work is performed near or on equipment or circuits which were or could be energized.
5. De-energize live parts to which an employee could be exposed before the employee works on or near them.

